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EXAMINER

RIBAR, TRAVIS B

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1711

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 15

Application Number: 09/641,014  
Filing Date: August 17, 2000  
Appellant(s): WENNINGER ET AL.

Theodore A. Gottlieb  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed March 25, 2003.

**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 1, 2, 4-6, 8-9, and 13-14, and claim 7 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

6,258,426	YAMAMOTO et al.	7-2001
5,866,249	YARUSSO et al.	2-1999
6,127,032	KELCH et al.	10-2000

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**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 4-6, 8-9, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. in view of Yarusso et al.

Yamamoto et al. shows a pressure-sensitive adhesive composition based on a polymeric elastomer (column 4, lines 1-11) adhered to thermoplastic substrates, but does not explicitly state that those substrates may be oriented in general or, more specifically, comprise biaxially oriented polyester such as that used as a substrate for a packing tape. Further, though Yamamoto et al. teaches some compositions of the polymeric pressure-sensitive adhesive, it does not specifically state the composition claimed by the applicant. The compositions claimed by Yamamoto et al. contain a crosslinking system based on isocyanates (column 8, lines 3-10) used in the same weight percent claimed by the applicant in the applicant's claim 3, but not many of the other aspects of the claim, such as the inclusion of natural rubber and tackifying resin materials in the pressure-sensitive adhesive composition. Further, Yamamoto et al., while teaching the use of a photoinitiator in the pressure-sensitive adhesive, does not teach the same photoinitiator composition that the applicant shows in claim 5.

Yarusso et al. '249 claims a pressure-sensitive adhesive comprising natural rubber (a non-thermoplastic elastomer) and a tackifying resin (column 3, lines 46-52) used to improve the adhesive properties of the pressure-sensitive adhesive. Further, Yarusso et al. '249 shows that this adhesive may be coated on a biaxially oriented polyester film substrate (column 5, lines 29-35), including polyethylene terephthalate

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(Yarusso et al. '249 claim 8). The substrate is also claimed to comprise a release surface or coating (column 3, lines 64-67 and Yarusso et al. '249 claim 4). The use of a crosslinking agent is also taught to be advantageous in this system (column 4, lines 26-28).

A specific composition forming a pressure-sensitive adhesive is shown in Yarusso et al. '249 in Example 7 (column 17, lines 18-45) which includes natural rubber, tackifier, a plasticizer, and an aging inhibitor. The use of fillers in this pressure sensitive adhesive is also taught (column 6, lines 43-48) and the use of fillers to alter the final properties of adhesive compositions is considered well-known in the art. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the invention of Yamamoto et al. in view of Yarusso et al. '249 such that:

- a. The pressure-sensitive adhesive comprises a pressure-sensitive adhesive that is specifically applied to an oriented polyester substrate, specifically biaxially oriented polyethylene terephthalate, in order to create an adhesive tape for use in a packing-tape application;
- b. The pressure sensitive adhesive may be coated on the oriented thermoplastic substrate and may further comprise a crosslinking system based on isocyanates, polyisocyanates, or a system comprising a photoinitiator and at least one polyfunctional methacrylic acid, used in amounts known to those of ordinary skill in the art in order to provide a means of crosslinking the pressure-sensitive adhesive, the end result being the creation of an adhesive tape;

- c. The pressure-sensitive adhesive may be coated on an oriented thermoplastic substrate and may further comprise a composition that may be crosslinked by means of UV radiation, the end result being the creation of an adhesive tape;
- d. The pressure-sensitive adhesive found in Yamamoto et al., including the crosslinking agent taught therein, may be coated on an oriented thermoplastic substrate and may further comprise the composition found in Yarusso et al. '249 (column 17, lines 18-45) and also includes fillers added in amounts known to those of ordinary skill in the art such that the composition of the pressure sensitive adhesive meets the requirements put forth in applicant's claim 3 in order to obtain a crosslinked natural-rubber pressure-sensitive adhesive with tailored properties, the end result being the creation of an adhesive tape;
- e. The pressure-sensitive adhesive may be coated on an oriented thermoplastic substrate that may comprise a release coating to promote the use of the resulting adhesive tape, the end result being the creation of an adhesive tape;
- f. The pressure-sensitive adhesive may be coated on an oriented thermoplastic substrate that may be treated with corona discharge treatment in order to promote the adhesion of the pressure-sensitive adhesive to the substrate, the end result being the creation of an adhesive tape;
- g. The pressure-sensitive adhesive may be coated on an oriented thermoplastic substrate and may further comprise a natural rubber and a

tackifying agent in order to promote adhesion, the end result being the creation of an adhesive tape.

The motivation being to utilize the properties of the adhesive in Yarusso et al. in a tape structure shown in Yamamoto et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. and Yarusso et al. as applied to claim 1 above, and further in view of Kelch et al.

Applicant claims an adhesive tape wherein a coat of a primer is applied between the thermoplastic film and the adhesive layer. Yamamoto et al. in view of Yarusso et al. show the adhesive layer adhered to an oriented thermoplastic substrate layer, but do not show a primer layer between them. The use of primers to promote adhesion between two layers is well known in the art. Kelch et al. shows the use of a primer layer between an oriented thermoplastic substrate and an adhesive material in order to promote the adhesion between them (column 3, lines 21-24). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use a primer between the oriented thermoplastic film substrate and the adhesive in order to promote the adhesion between those two layers.

The examiner withdraws the rejection of claim 7 made using the combination of Yamamoto et al. and Kelch et al. (see paragraph 6 of the office action dated December 10, 2001). This rejection was unintentionally maintained in the final rejection. The examiner intended to withdraw the rejection in the office action dated December 10,

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2001 because the 102 rejection of the independent claim in view of Yamamoto et al. was withdrawn in the final rejection and because Kelch et al. is applied to the rejections to show the use of a primer layer in an adhesive tape structure, not to show the currently claimed adhesive composition.

The examiner previously withdrew the rejection of claim 7 using the combination of Ikeda et al. and Kelch (see paragraph 2 of the office action dated July 16, 2002).

**(11) Response to Argument**

The applicant argues that their claimed thermal crosslinking limitation is not anticipated by Yamamoto et al., stating that the patent discloses a preference for UV crosslinking and that by doing so it teaches away from using thermal crosslinking. The examiner respectfully disagrees with this position because Yamamoto et al. does disclose thermal crosslinking (column 7, lines 25-33) and the mere fact that it shows a preference for UV crosslinking does not constitute the reference teaching away from thermal crosslinking. The applicant is attempting to limit the scope of the teachings in Yamamoto et al. to the preferred embodiments therein and the examiner respectfully opposes with that application of the reference.

The applicant also argues that their claimed thermal crosslinking is not the primary means of crosslinking the adhesive in Yamamoto et al. and the heating that is described in Yamamoto et al. would be unnecessary in an adhesive that was prepared without the use of solvents. The examiner does not believe that the teaching in



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Yamamoto et al. pointing to thermal crosslinking is limited to crosslinking the adhesive during a drying process, since drying the adhesive could easily be done without initiating a thermal crosslinking process (e.g. by drying the adhesive at a temperature lower than the temperature needed to thermally crosslink the polymer) and because the thermal crosslinking step in Yamamoto et al. appears to be separate from the drying step it teaches (column 7, lines 25-33).

The applicant's argument with regard to the lack of a primary thermal crosslinking step in Yamamoto et al. is also not persuasive. The applicant has not claimed a solely thermally-crosslinking process and as such, the current claim language is open to other crosslinking processes being present in addition to the thermal crosslinking process. In fact, the applicant claims UV crosslinking in a dependent claim (claim 6). The examiner believes that since the applicant claims UV crosslinking in addition to thermal crosslinking, Yamamoto et al. cannot be discounted as nonanalogous art or as teaching away from the applicant's invention just because it shows a preference for UV crosslinking.

Finally, the examiner would like to note that a composition may be thermally-crosslinkable even if it is not crosslinked using heat. Though Yamamoto et al. shows a preference for UV crosslinking, it shows that thermal crosslinking is possible and expected in the invention it discloses. This therefore meets the 'thermally-crosslinkable' limitation of the claims.

The applicant also argues the applicability of Yarusso et al. to the present claims, stating that Yarusso et al. teaches away from thermally crosslinking its

adhesives because the orientation within the adhesives could be lost. Again, the examiner notes that the applicant does not claim an adhesive that is thermally crosslinked (and would face product-by-process issues if they did), only that the crosslinking agents be thermally active. Yamamoto et al. shows that crosslinking agents can be both UV (for example) and heat-activated, so the teachings in Yarusso et al. that UV crosslinking is preferable to thermal crosslinking does not preclude the use of thermally activated crosslinking agents.

The examiner also notes that the example the rejection points to (Example 7, column 17, lines 18-45) does not include an oriented polymer, so the teaching within the reference that thermal crosslinking could destroy the adhesive's orientation is not relevant. For these reasons, the examiner does not believe that Yarusso et al. teaches against the applicant's invention.

The applicant's argument that the references teach away from each other is also not persuasive. As discussed above, both Yamamoto et al. and Yarusso et al. teach adhesives that may be thermally-crosslinkable.

The applicant argues that the invention as a whole is not disclosed by the references the examiner cited and that their adhesive tape contains properties not present in the adhesive tapes disclosed by the reference. Regarding the applicant's position that the invention as a whole is not disclosed, the examiner respectfully disagrees because all of the claim limitations are found in the references (see above). The examiner is not certain whether or not the applicant's adhesive has the same

properties the applicant discloses, but notes that such properties are nowhere in the claims and cannot be relied upon to further limit the claims as they currently stand.

The applicant also appears to argue that there is no motivation to combine Yamamoto et al. and Yarusso et al. The examiner disagrees, as the substitution of one adhesive for another in a tape structure contains the inherent motivation of wanting to utilize the properties of the newly substituted adhesive in place of the original adhesive and to create an adhesive tape known to be useful.

Finally, the applicant argues that Yamamoto et al. and Yarusso et al. do not include primer layers and that Kelch et al. does not fix this discrepancy because the primer in Kelch et al. is used to promote adhesion to glass, therefore any combination of these references would constitute hindsight reasoning. The examiner respectfully disagrees and points out that the primer in the multilayer structure in Kelch et al. is used to promote the adhesion of the adhesive to the substrate in the multilayer (column 3, lines 21-24), not, as the applicant appears to believe, of the adhesive to the glass on a bottle. The motivation for using this primer layer is to improve the adhesion between the adhesive and the substrate.

The examiner acknowledges that this motivation is the same motivation as the applicant's, but the mere fact that the motivations are the same does not support the argument of hindsight. The motivation for adding a primer between layers of a multilayer structure is well-known in the art and existed within the art well before the applicant's invention. Therefore the motivation behind the combination of these references does not constitute hindsight reasoning.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Travis B Ribar  
Examiner  
Art Unit 1711

TBR

June 16, 2003

Conferees

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